

**REMARKS**

This application has been carefully reviewed in light of the Office Action mailed August 23, 2005. Claims 1-21 are pending in the Application. Applicant respectfully requests reconsideration and favorable action of all pending claims in view of the following remarks.

**Claim Objections:**

The Office Action objects to Claims 6 and 10-11 due to informalities. These claims have been amended as suggested in the Office Action. Favorable action is requested.

**Section 102 and 103 Rejections:**

The Office Action rejects Claims 1-2, 4-5, 12-18 and 20-21 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 6,359,520 to Frazier et al. ("*Frazier*"), and Claims 3, 6-11, 19 under 35 U.S.C. § 103(a) as being unpatentable over *Frazier* as applied to Claim 1 above in view of U.S. Patent 5,930,323 to Tang ("*Tang*"). Applicant respectfully traverses.

Amended Claim 1 recites "a circuit being other than an oscillator that includes: a first portion . . . a second portion." Support for this amendment can be found at Page 6, line 26, Page 8, line 10, Page 9, lines 26-28, and FIGURES 7-10, for example. The cited reference does not teach or suggest this combination of limitations.

Without acquiescing to the statement in the Office Action that the cited reference teaches the claimed second portion, Applicants note that the cited reference clearly does not teach a circuit being other than an oscillator that includes the claimed second portion. Rather, Figures 10, 12, and 13, on which the Office Action relies to teach the claimed second portion, are all oscillators. This is so because the reference is directed to improved oscillators. The claims and abstract of the cited reference confirm the reference is directed to an "improved resonant tunneling device (RTD) oscillator" Abstract, *See also* independent Claims 1, 4, and 10. Further, the Background Section concludes with the statement: "there remains the general problem of providing RTD-based circuits that oscillate at ultra high frequency while suppressing lower frequency oscillation."

Thus, the cited reference does not teach a circuit being other than an oscillator that includes the claimed first and second portions, and therefore Claim 1 is allowable, as are all

claims depending therefrom. Claim 15, as amended, is allowable for analogous reasons, as are all claims depending therefrom. Reconsideration and favorable action are requested.

New independent Claim 24 recites "a circuit that includes: . . . second portion . . . so that at said selected frequency said complex conjugate reactance substantially cancels said reactance of said resonant tunneling device" and "a clock signal source having a frequency approximately the same as the selected frequency." Support for this new claim may be found in previous Claim 1 and at Page 9, lines 24 - Page 10, line 1, for example. The cited reference does not teach or suggest this combination of limitations. Indeed, none of the oscillators of Figures 10, 12, and 13, on which the Office Action relies to try to teach the claimed second portion, even includes a clock signal source - which is as to be expected with oscillators. Without teaching or suggesting a clock signal source, these embodiments clearly do not teach or suggest that the frequency of the clock signal source is approximately the same as the selected frequency at which the complex conjugate reactance substantially cancels the reactance of the resonant tunneling device. For at least this reason, Claim 24 is allowable. Favorable action is requested.

New independent Claim 25 recites, "a circuit that includes: a first portion . . . a second portion . . . " and "further comprising an alternating current drive source for the circuit." Support for this new claim may be found in Claim 1 and Figures 7-10, for example. This combination of limitations is not shown in the cited reference. In particular, the oscillators of Figures 10, 12, and 13, which use a DC power source, do not teach or suggest an alternating current drive source in combination with the claimed second portion. For at least this reason, Claim 25 is allowable. Favorable action is requested.

**CONCLUSION**

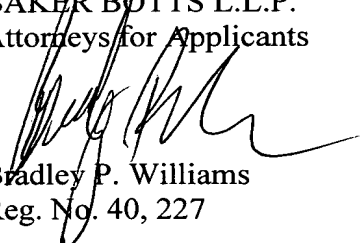
Applicant has now made an earnest attempt to place this case in condition for immediate allowance. For the foregoing reasons and for other apparent reasons, Applicant respectfully requests allowance of all pending claims.

If the Examiner feels that prosecution of the present Application may be advanced in any way by a telephone conference, the Examiner is invited to contact the undersigned attorney at 214-953-6447.

The required fees of \$550.00 for additional claims and \$790.00 for filing the RCE are submitted herewith and are believed to be correct. The Commissioner is hereby authorized to charge any additional fees or credit any overpayments to Deposit Account No. 02-0384 of Baker Botts, L.L.P.

Respectfully submitted,

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